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<b>14. ABSTRACT</b> Hill Air Force Base (AFB) proposes to provide adequate facilities for vehicle maintenance and repair operations on Hill Air Force Base (AFB) and to demolish 11 antiquated buildings on the base. The findings of this EA indicate that the proposed action would not have significant adverse effects on the human environment or any of the environmental resources as described in the EA. Therefore, it is concluded that a Finding of No Significant Impact is justified.												
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Hill Air Force Base, Utah

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***Final***

**Environmental Assessment:  
Proposed Consolidated Transportation  
Facility, Hill Air Force Base, Utah**

February 1, 2011

***Final***  
**Environmental Assessment (EA):**  
**Proposed Consolidated Transportation Facility,**  
**Hill Air Force Base, Utah**

**Contract No. FA8201-09-D-0006**  
**Delivery Order No. 0021**

**Department of the Air Force**  
**Air Force Materiel Command**  
**Hill Air Force Base, Utah 84056**

**February 1, 2011**

**Prepared in accordance with the Department of the Air Force Environmental Impact Analysis Process (EIAP) 32 CFR Part 989, Effective July 6, 1999, which implements the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) regulations.**

## EXECUTIVE SUMMARY

### Purpose and Need

The purpose of the proposed action is to provide adequate facilities for vehicle maintenance and repair operations on Hill Air Force Base (AFB) and to demolish 11 antiquated buildings on the base.

The proposed facility would alleviate overcrowded and unsafe working conditions. Workers are being exposed to vehicle exhaust fumes in excess of recommended standards. Existing bays and doors do not accommodate snow plows or other special purpose equipment. The proposed demolitions would allow Hill AFB to comply with an Air Force Materiel Command requirement not to increase the footprint of base structures.

### Selection Criteria

The transportation facility on Hill AFB should:

- be located in close proximity to Hill AFB fleet vehicles and the flight line;
- provide 65,000 square feet (ft<sup>2</sup>) of military compliant structures, plus driveways and parking;
- comply with United States Air Force (USAF) health and safety standards;
- comply with USAF real property policies;
- not encroach on existing facilities;
- not encroach on locations that have been approved for upcoming base facilities; and
- be adjacent to existing utilities.

### Scope of Review

The issues that were identified for detailed consideration are: air quality, solid and hazardous wastes (including liquid waste streams), and water quality.

### Alternatives Considered in Detail

#### Alternative A (Proposed Action - Construct a New Consolidated Transportation Facility)

- The proposed action would include:

- footings, foundations, and a floor slab supporting a structural steel shell (65,000 ft<sup>2</sup> of building space);
- all utilities including mechanical and electrical systems;
- surrounding driveways, parking, concrete sidewalks, and landscaping;
- connections to adjacent buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains; and
- demolition of Buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243, 1251, 1253, and 1607.

Alternative B (No Action Alternative) - Under the no action alternative, a new consolidated transportation facility would not be constructed. The existing facilities, with deficiencies, would operate as they currently exist.

## Results of the Environmental Assessment

Two alternatives were considered in detail. The results of the environmental assessment are summarized in the following table.

Summary Comparison of Predicted Environmental Effects

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	<p>Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled.</p> <p>Air emissions from operations would be less than 0.3 tons per year for each criteria pollutant as well as for hazardous air pollutants (HAPs).</p> <p>Conformity with the Clean Air Act was demonstrated.</p>	Existing air emissions are 0.2 tons per year or less for each criteria pollutant as well as for HAPs.
Solid and Hazardous Waste	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.	Non-regulated wastes are collected and disposed. Various regulated wastes are collected, stored, analyzed if necessary, and either recycled or disposed in accordance with federal and state regulations.
Water Quality	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.	Good housekeeping measures and other best management practices are being followed.

## Identification of the Preferred Alternative

Hill AFB prefers Alternative A (the proposed action).

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## LIST OF ACRONYMS AND CHEMICAL TERMS

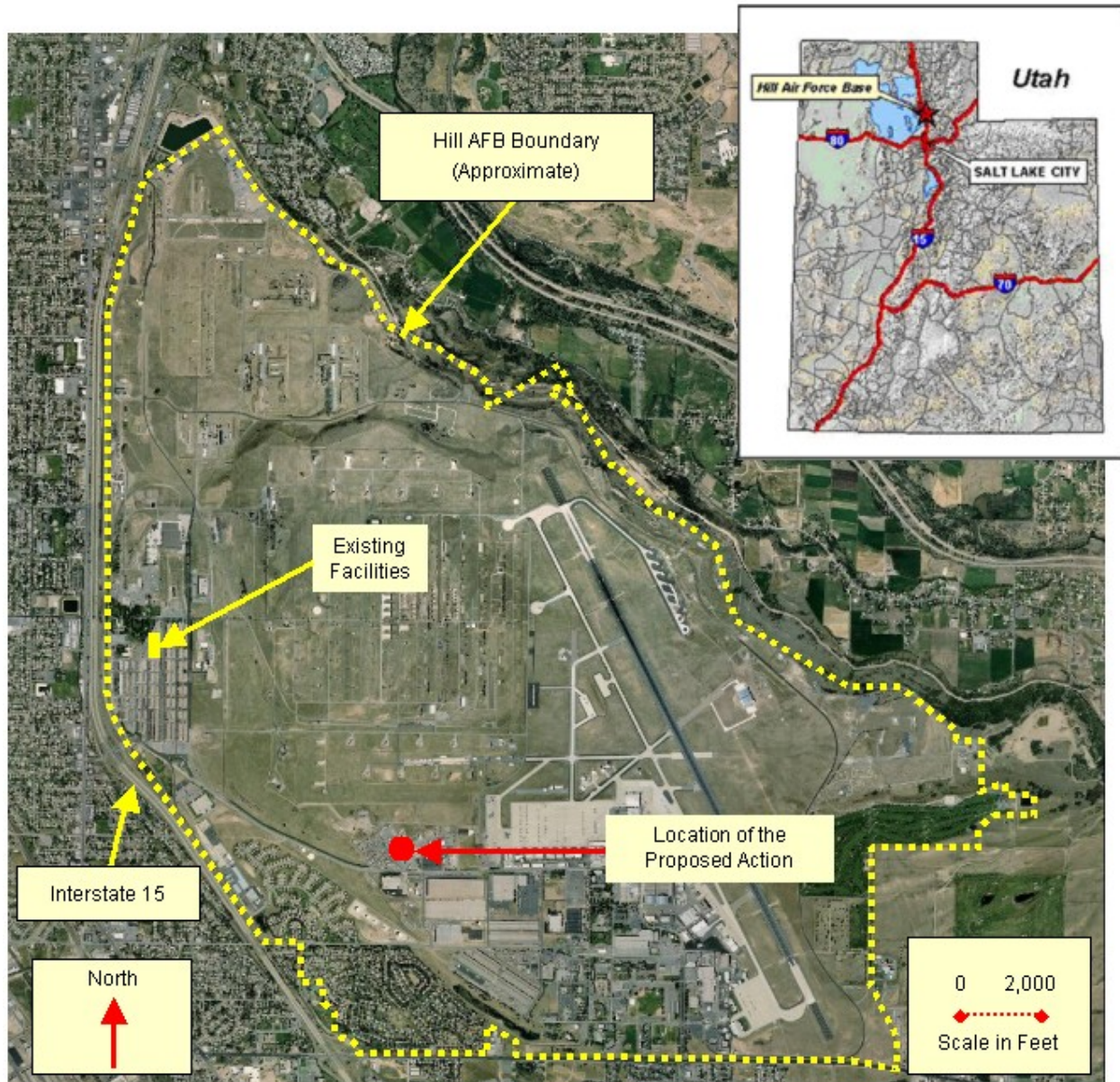
AFB	Air Force Base
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
ALC	Air Logistics Center
bgs	Below Ground Surface
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
DAQ	Division of Air Quality (Utah)
DRMO	Defense Reutilization and Marketing Office
DWSP	Drinking Water Source Protection
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EPA	Environmental Protection Agency (United States)
FONSI	Finding of No Significant Impact
ft <sup>2</sup>	Square Feet
HAP	Hazardous Air Pollutant
hr	Hour
lb	Pound
MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
MOA	Memorandum of Agreement
MS4	Municipal Separate Storm Sewer System
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHRP	National Register of Historic Places

NO <sub>x</sub>	Oxides of Nitrogen
O <sub>3</sub>	Ozone
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PM-10	Particulates Smaller Than 10 Microns in Diameter
PM-2.5	Particulates Smaller Than 2.5 Microns in Diameter
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>x</sub>	Oxides of Sulfur
SWPPP	Stormwater Pollution Prevention Plan
UAC	Utah Administrative Code
UGS	Utah Geological Survey
USAF	United States Air Force
USC	United States Code
VOC	Volatile Organic Compound
WFRC	Wasatch Front Regional Council

# 1 PURPOSE OF AND NEED FOR ACTION

## 1.1 Introduction

Hill Air Force Base (AFB) is located approximately 25 miles north of downtown Salt Lake City and seven miles south of downtown Ogden, Utah (Figure 1). Hill AFB is surrounded by several communities: Roy and Riverdale to the north; South Weber to the northeast; Layton to the south; and Clearfield, Sunset, and Clinton to the west. The base lies primarily in northern Davis County with a small portion located in southern Weber County.



**Figure 1: Location of the Proposed Action on Hill AFB**

Hill AFB is an Air Logistics Center (ALC) that maintains aircraft, missiles, and munitions for the United States Air Force (USAF). In support of that mission, Hill AFB provides worldwide engineering and logistics management for the F-22 Raptor, F-35 Joint Strike Fighter, F-16 Fighting Falcon, and A-10 Thunderbolt aircraft. Hill AFB also accomplishes depot repair, modification, and maintenance of the F-16, A-10 Thunderbolt, and C-130 Hercules aircraft. Additional activities include maintaining aircraft landing gear, wheels and brakes for military aircraft, rocket motors, air munitions, guided bombs, photonics equipment, training devices, avionics, instruments, hydraulics, software, and other aerospace-related components.

To support Hill AFB missions, the vehicle maintenance flight manages and controls the base vehicle fleet by performing lubrication, inspections, general repairs, and replacing major parts. They provide related services such as operating buses, taxis, tow trucks, cranes, and rail cars.

## **1.2 Purpose of the Action**

The purpose of the proposed action is the following:

- Provide adequate facilities for vehicle maintenance and repair operations on Hill AFB.
- Demolish 11 antiquated buildings on Hill AFB (see Section 1.3 for details).

## **1.3 Need for the Action**

The existing transportation facilities on Hill AFB are World War II era buildings that were not intended to be used for their current purposes. Working conditions do not meet minimum worker safety standards. A notice dated June 22, 2010 posted on Building 1253 indicates workers are being exposed to vehicle exhaust fumes in excess of recommended standards due to inadequate ventilation systems.

Military construction (MILCON) program documents (USAF 2010) explain the existing facilities lack adequate space for the assigned workload. The proposed facility would alleviate overcrowded and unsafe working conditions. Existing bays and doors do not accommodate snow plows or other special purpose equipment. These items are currently stored and serviced outdoors, shortening their useful life. The proposed action would provide a state of the art facility to improve the efficiency of maintenance and repair activities currently being performed in antiquated buildings. The proposed demolitions would allow Hill AFB to comply with an Air Force Materiel Command requirement not to increase the footprint of base structures.

## **1.4 Alternative Selection Criteria**

Due to the considerations presented in the preceding sections and Air Force planning process considerations, the following selection criteria were established. The transportation facility on Hill AFB should:

- Be located in close proximity to fleet vehicles and the flight line.

The current practice of driving or towing vehicles three miles from the primary fleet vehicle location to the transportation facility is inefficient and wasteful. The proposed location would remove forklifts, trucks, and other heavy equipment from roads that are used primarily by passenger cars. This would increase the safety of military personnel and their children, civilian employees, contractors, and base visitors.

- Provide 65,200 square feet (ft<sup>2</sup>) of military compliant structures, plus driveways and parking.

An Air Force economic analysis (Ogden 2009) documented the need for a transportation facility comprising 75,300 ft<sup>2</sup>. A subsequent Hill AFB document (Hill 2009) reduced the desired size to 65,200 ft<sup>2</sup>.

- Comply with USAF health and safety standards.

As stated above, workers are currently exposed to unacceptable levels of vehicle exhaust fumes.

- Comply with USAF real property policies.

The estimated cost for renovating and upgrading the current World War II era structures would exceed 70 percent of the real property value of the existing facilities. Pursuing renovation would violate current USAF real property policies.

- Not encroach on existing facilities.

Force protection requirements state a 25 meter buffer zone is required for structures on base. This buffer zone must be considered when proposing new facilities on base. Existing utility main lines (irrigation canals, large water, sewer, and gas lines) should also be avoided.

- Not encroach on locations that have been approved for future base facilities.

Vacant sites on Hill AFB are not necessarily available sites. The Hill AFB facilities board approves locations for new structures. Such approvals cannot subsequently be changed without jeopardizing the previously approved and/or funded project.

- Be adjacent to existing utilities.

The MILCON funding approval for this project was based on utilities being present at the site boundary.

## **1.5 Relevant Plans, EISs, EAs, Laws, Regulations, and Other Documents**

During the scoping process, no relevant plans, environmental impact statements (EISs), or environmental assessments (EAs) were identified.

The following federal, state, and local laws and regulations would apply to the proposed action:

- The National Environmental Policy Act (NEPA), Title 42 of the United States Code (USC) Section 4321 *et seq.*
- Council on Environmental Quality regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508.
- USAF-specific requirements contained in 32 CFR Part 989, Environmental Impact Analysis Process (EIAP).
- Safety guidelines of the Occupational Safety and Health Administration (OSHA).
- Relevant Air Force Occupational Safety and Health (AFOSH) standards.
- Utah's fugitive emissions and fugitive dust rules (Utah Administrative Code [UAC] Section R307-309).
- Utah's State Implementation Plan (UAC Section R307-110), which complies with the General Conformity Rule of the Clean Air Act (CAA), Section 176 (c).
- Determining Conformity of Federal Actions to State or Federal Implementation Plans, 40 CFR Part 93.154.
- USAF *Conformity Guide*, 1995.
- Utah Asbestos Rules, UAC, Section R307-801.
- The Resource Conservation and Recovery Act (RCRA), 42 USC Chapter 82, and regulations promulgated thereunder, 40 CFR Part 260 *et seq.*
- Federal facility agreement dated April 10, 1991, under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 USC Section 9601 *et seq.*
- Utah hazardous waste management regulations contained in UAC Section R315, and the Hill AFB *Hazardous Waste Management Plan* dated May, 2001, and subsequent versions.
- The Clean Water Act (CWA), 33 USC Section 1251 *et seq.*, and Utah statutes and regulations promulgated thereunder.
- The Energy Independence and Security Act (EISA) of 2007, Public Law No. 110-140, Sec. 438, Stormwater Runoff Requirements for Federal Development Projects.
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions.

- The Hill AFB *Updated Drinking Water Source Protection (DWSP) Plan, Hill Air Force Base Well 5*, dated May, 2008, and subsequent versions.
- Migratory Bird Treaty Act (MBTA), 16 USC Sections 703-712 *et seq.*
- Bald and Golden Eagle Protection Act, 16 USC Sections 668-668c *et seq.*
- The Hill AFB *Integrated Natural Resources Management Plan*, dated August, 2007, and subsequent versions.
- The Hill AFB *Integrated Cultural Resources Management Plan*, dated January, 2007, and subsequent versions.
- The National Historic Preservation Act (NHPA) of 1966, as amended 16 USC Section 470 *et seq.*

A memorandum of agreement (MOA - Hill 2008) exists related to proposed demolition of Buildings 1132, 1133, 1138, 1141, and 1243. A MOA (Hill 2004) exists related to proposed demolition of Building 1607. During the scoping process, no other documents were identified as being relevant to the proposed action.

## **1.6 Decisions That Must Be Made**

Hill AFB must decide whether to:

- Construct a new consolidated transportation facility, or
- Not construct a new consolidated transportation facility (no action).

If a new consolidated transportation facility is constructed, then a location must be selected.

## **1.7 Scope of this Environmental Analysis**

The scope of the current environmental analysis is to explore environmental issues related to the proposed action and the reasonable alternatives identified within this document.

### **1.7.1 History of the Planning and Scoping Process**

Scoping discussions were held: to identify potential environmental concerns; to facilitate an efficient environmental analysis process; to identify issues and alternatives that would be considered in detail while devoting less attention and time to issues that were not relevant; and to save time in the overall process by helping to ensure that draft documents would adequately address relevant issues, thereby reducing the time required to proceed to a final document.

On September 14, 2010, an initial scoping meeting was conducted in the Jim Vining Conference Room in Building 5, Hill AFB. Attendees included proponents of the proposed action, the Hill AFB EIAP Interdisciplinary Team, and the authors of this document.

During this meeting and other scoping interaction, the following environmental issues were addressed:

- air quality;
- solid and hazardous wastes (including liquid waste streams);
- biological resources;
- geology and surface soils;
- water quality;
- cultural resources;
- occupational safety and health;
- air installation compatible use zone (AICUZ); and
- socioeconomic resources.

### **1.7.2 Issues Studied in Detail**

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are:

#### **Air Quality** (attainment status, emissions, Utah's state implementation plan [SIP])

Buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243, 1251, 1253, and 1607, some of which may contain asbestos, would be demolished as part of the proposed action. For the purposes of this document, if the word construction is used by itself, any potential demolition activities are included.

Air emissions would be produced by construction equipment. Operating the proposed action would create air emissions. Air quality effects are discussed in Section 4 of this document.

#### **Solid and Hazardous Wastes** (materials to be used, stored, recycled, or disposed, including liquid waste streams; existing asbestos, lead-based paint, mercury, and polychlorinated biphenyls [PCBs])

During construction activities, solid wastes would be generated, and other hazardous wastes might be generated that would require proper treatment and/or disposal. Additional hazardous wastes could be generated if a spill of fuel, lubricants, or construction-related chemicals were to occur.

Operating the proposed action would be expected to create solid and hazardous wastes. Effects related to solid and hazardous wastes are discussed in Section 4 of this document.



**Water Quality** (surface water, groundwater, water quantity, wellhead protection zones)

Based on information provided by Hill AFB, the land area to be disturbed would be approximately seven acres in size. The proposed action would be subject to stormwater permit and compliance requirements both during the construction period and during operations.

Depth to groundwater is at least 25 feet below the ground surface (bgs) in the vicinity of proposed demolition activities, and 40 feet bgs for the proposed consolidated transportation facility. The proposed action would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities).

The scoping discussions did not identify any issues related to quantity of water. The proposed action would not be located within a DWSP zone.

Effects related to water quality are discussed in Section 4 of this document.

Liquid waste streams created during construction and from operating the proposed action are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

### **1.7.3 Issues Eliminated From Further Study**

The issues that were not carried forward for detailed consideration in Sections 3 and 4 are:

**Biological Resources** (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains)

Approximately seven acres of previously disturbed land would be re-developed by the proposed action. The site is essentially devoid of flora and fauna.

The scoping discussions did not identify any issues related to wetlands or floodplains.

**Geology and Surface Soils** (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination)

The scoping discussions did not identify any issues related to seismicity, topography, minerals, or geothermal resources.

Excavations would be necessary to install: footings; foundations; and buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains. Discussions related to preventing soil erosion (stormwater pollution prevention) are addressed under water quality effects (Section 4 of this document).

Contamination of shallow soil is not known to exist in the vicinity of the proposed action, but the potential to encounter contaminated soil does exist. Potential discovery of suspicious soils during excavation is addressed under solid and hazardous wastes (Section 4 of this document).

### **Cultural Resources** (archaeological, architectural, traditional cultural properties)

Regarding the proposed demolition activities, Buildings 1240, 1241, and 1251 are not historic. Building 1253 has been determined ineligible for listing in the National Register of Historic Places (NHRP). Building 1153 is considered an element of infrastructure and does not require evaluation. Buildings 1132, 1133, 1138, 1141, and 1243 have been mitigated in accordance with a 2008 MOA (Hill 2008) related to future development on the west side of Hill AFB. Building 1607 has been mitigated in accordance with a 2004 MOA (Hill 2004) related to demolition of historic buildings in the explosive clear zone area.

Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for historic properties is extremely low. However, if any such properties are found during construction, ground-disturbing activities in the immediate vicinity would cease, the Hill AFB cultural resources program manager would be notified, and unanticipated discovery of archaeological deposits procedures would be implemented with direction from the Hill AFB cultural resources program manager in accordance with Standard Operating Procedure 5 in the Hill AFB *Integrated Cultural Resources Management Plan* (Hill 2007a).

The Utah state historic preservation office (SHPO) concurred with a finding of no adverse effect after reviewing the proposed action (Appendix A).

Hill AFB has determined formal consultation with American Indian Tribes is not warranted given the absence of resources that may be reasonably construed as being of interest to them.

### **Occupational Safety and Health** (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft)

Throughout the construction phase of the project, Hill AFB contractors would follow OSHA safety guidelines as presented in the CFR. Hazardous materials that could be used during construction are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

Related to Hill AFB military personnel and civilian employees, the Bio-environmental Engineering Flight (75 AMDS/SGPB) is responsible for implementing AFOSH standards. The AFOSH program addresses (partial list): hazard abatement, hazard communication, training, personal protective equipment and other controls to ensure that occupational exposures to hazardous agents do not adversely affect health and safety, and acquisition of new systems.

The scoping discussions did not identify any issues related to occupational safety and health that would not be routinely addressed by OSHA rules and/or the Bio-engineering Flight.

### **AICUZ** (noise, accident potential, airfield encroachment)

The scoping discussions did not identify any issues related to noise, aircraft accident potential, or airfield encroachment.

**Socioeconomic Resources** (local fiscal effects including employment, population projections, and schools)

Opportunities would exist for local construction workers if the proposed action is constructed. Operating the proposed action would not be expected to create additional jobs at Hill AFB. The scoping discussions did not identify any issues related to population projections or schools.

## **1.8 Applicable Permits, Licenses, and Other Coordination Requirements**

Obtaining, modifying, and/or complying with the following permits would be required to implement the proposed action.

- The Hill AFB Title V Operating Permit (Permit Number: 1100007001, and subsequent versions). See Section 4.2.1 for additional details.
- Utah's Stormwater General Permit for Construction Activities permit number UTR300000, dated July 1, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) permit number UTR090000, dated August 1, 2010, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's Multi Sector General Permit for Industrial Facilities permit number UTR000444, dated January, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions. See Section 4.2.3 for additional details.

The proponents would coordinate with the Hill AFB hazardous materials program manager (75 CEG/CEVC) to discuss hazardous materials brought on base to construct the proposed action. See Section 4.2.2 for additional details.

## **2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION**

### **2.1 Introduction**

This section discusses the process used to develop the alternatives. It lists the alternatives and compares them. This section also states the Air Force's preferred alternative.

### **2.2 Process Used to Develop the Alternatives**

As discussed in Sections 1.3 and 1.4 of this document, Hill AFB proposes to provide a new consolidated transportation facility. The proposed facility would address the needs discussed in Section 1.3 and the criteria stated in Section 1.4 of this document.

Hill AFB planners and engineers investigated the feasibility of renovating the existing transportation facilities (see Section 2.4.1). Other locations for the facility (see Section 2.4.2) were considered by the Hill AFB Facility Working Group. The option to take no action was also considered.

### **2.3 Description of Alternatives Considered in Detail**

#### **2.3.1 Alternative A: Proposed Action - Construct a New Consolidated Transportation Facility**

The proposed action is to construct a new consolidated transportation facility in the southwestern portion of Hill AFB (see Figure 2). MILCON project data indicate the proposed action would consist of:

- Footings, foundations, and a floor slab supporting a structural steel shell (65,200 ft<sup>2</sup> of building space).
- All utilities including mechanical and electrical systems.
- Surrounding driveways, parking, concrete sidewalks, and landscaping.
- Connections to adjacent buried utilities consisting of water, electricity, natural gas, telephone/data, sanitary sewer, and storm drains.
- Demolition of Buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243, 1251, 1253, and 1607.



### **2.3.2 Alternative B: No Action**

Under the no action alternative, a new consolidated transportation facility would not be constructed, and adequate facilities would not be provided. The existing facilities would operate as they currently exist. The deficiencies discussed in Section 1.3 would continue to exist.

## **2.4 Alternatives Eliminated From Detailed Study**

### **2.4.1 Alternative C: Renovating Existing Facilities**

Renovation would require adding square footage, increasing the size of bays and doors, eliminating worker safety violations, and completing additional upgrades to these World War II era structures. The estimated cost for renovation would exceed 70 percent of the real property value of the existing facilities. Pursuing renovation would violate current USAF real property policies.

### **2.4.2 Alternative D: Other Locations on Base**

Hill AFB planners and engineers considered other locations for the new consolidated transportation facility. An alternative site north of the Defense Reutilization and Marketing Office (DRMO) has conflicts with a water main and with the area set aside for west side development on Hill AFB. An alternative site south of Building 825 has conflicts with approved sitings for an automotive/arts and crafts skills center and a consolidated warehouse.

No potential site was identified that could meet the selection criteria presented in Section 1.4.

## **2.5 Summary Comparison of the Alternatives and Predicted Achievement of the Project Objectives**

### **2.5.1 Summary Comparison of Project Alternatives**

The no action alternative (Alternative B) would be to continue current operations using the existing facilities. The deficiencies discussed in Section 1.3 would continue to exist.

Under Alternative A, C, or D, a modern consolidated transportation facility would be provided. Only Alternative A (the proposed action) would fully satisfy the needs discussed in Section 1.3 and the criteria stated in Section 1.4 of this document.

### 2.5.2 Predicted Achievement of Project Objectives

Alternative	A Proposed Action	B No Action	C Renovating Existing Facilities	D Other Locations on Base
<b>Description of the Project Objective</b>				
Be located in close proximity to Hill AFB fleet vehicles and the flight line	Yes	No	No	No
Provide 65,200 ft <sup>2</sup> of military compliant structures, plus driveways and parking	Yes	No	Yes	Yes
Comply with USAF health and safety standards	Yes	No	Yes	Yes
Comply with USAF real property policies	Yes	Yes	No	Yes
Not encroach on existing facilities	Yes	Yes	Yes	No
Not encroach on locations that have been approved for upcoming base facilities	Yes	Yes	Yes	No
Be adjacent to existing utilities	Yes	Yes	Yes	Yes

**Table 1: Predicted Achievement of Project Objectives**

### 2.6 Identification of the Preferred Alternative

Hill AFB prefers Alternative A (the proposed action).

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 Introduction**

Section 3 of this document discusses the existing conditions of the potentially affected environment, establishing a resource baseline against which the effects of the various alternatives can be evaluated. It presents relevant facilities and operations, environmental issues, pre-existing environmental factors, and existing cumulative effects due to human activities in the vicinity of the proposed action or the alternative locations.

Issues discussed during scoping meetings, but eliminated from detailed consideration (see Section 1.7.3) include:

- biological resources (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains);
- geology and surface soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination);
- cultural resources (archaeological, architectural, traditional cultural properties);
- occupational safety and health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft);
- AICUZ (noise, accident potential, airfield encroachment); and
- socioeconomic resources (local fiscal effects including employment, population projections, and schools).

### **3.2 Description of Relevant Facilities and Operations**

As stated above, the existing facilities do not comply with the criterion to provide 65,000 ft<sup>2</sup> of military compliant structures. No other relevant facilities or operations were identified.

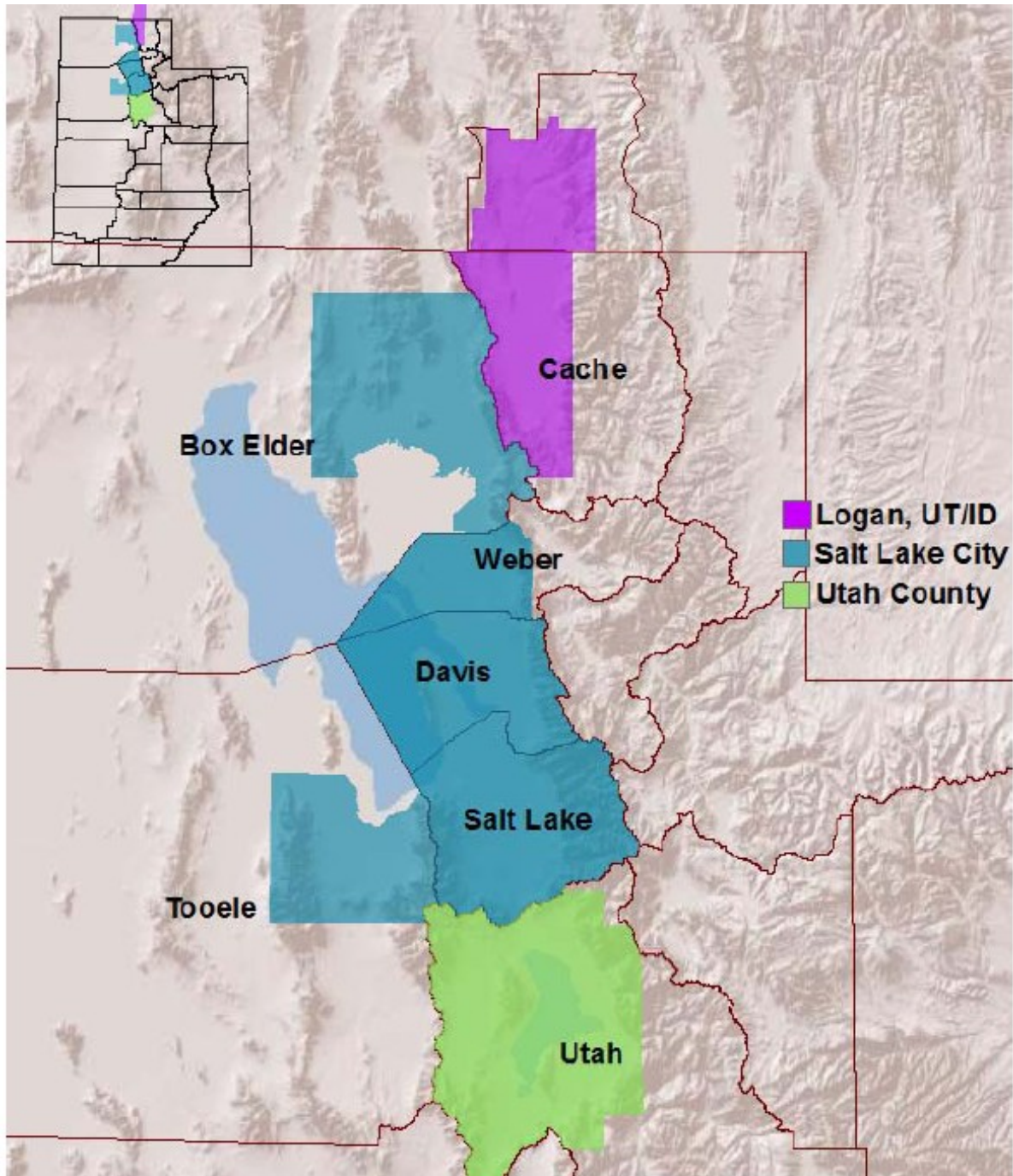
### **3.3 Description of Relevant Affected Issues**

#### **3.3.1 Air Quality**

Hill AFB is located in Davis and Weber Counties, Utah. The Utah Division of Air Quality (DAQ) reports neither county is in complete attainment status with federal clean air standards (DAQ 2010a, see Figures 4 and 5). Non-attainment areas fail to meet national ambient air quality standards (NAAQS) for one or more of the criteria pollutants: oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), particulates less than 10 microns in diameter (PM-10), particulates less than 2.5 microns in diameter (PM-2.5), carbon monoxide (CO), and lead. Davis County (in which the proposed action lies) is designated as a non-attainment area for PM-2.5 and is a maintenance area for ozone. Davis County is awaiting a non-attainment designation for ozone (DAQ 2007, see Figure 6). Hill AFB would be required to obtain offsets for emission



increases due to any major modification in accordance with Appendix S to 40 CFR Part 51, Emission Offset Interpretative Ruling.

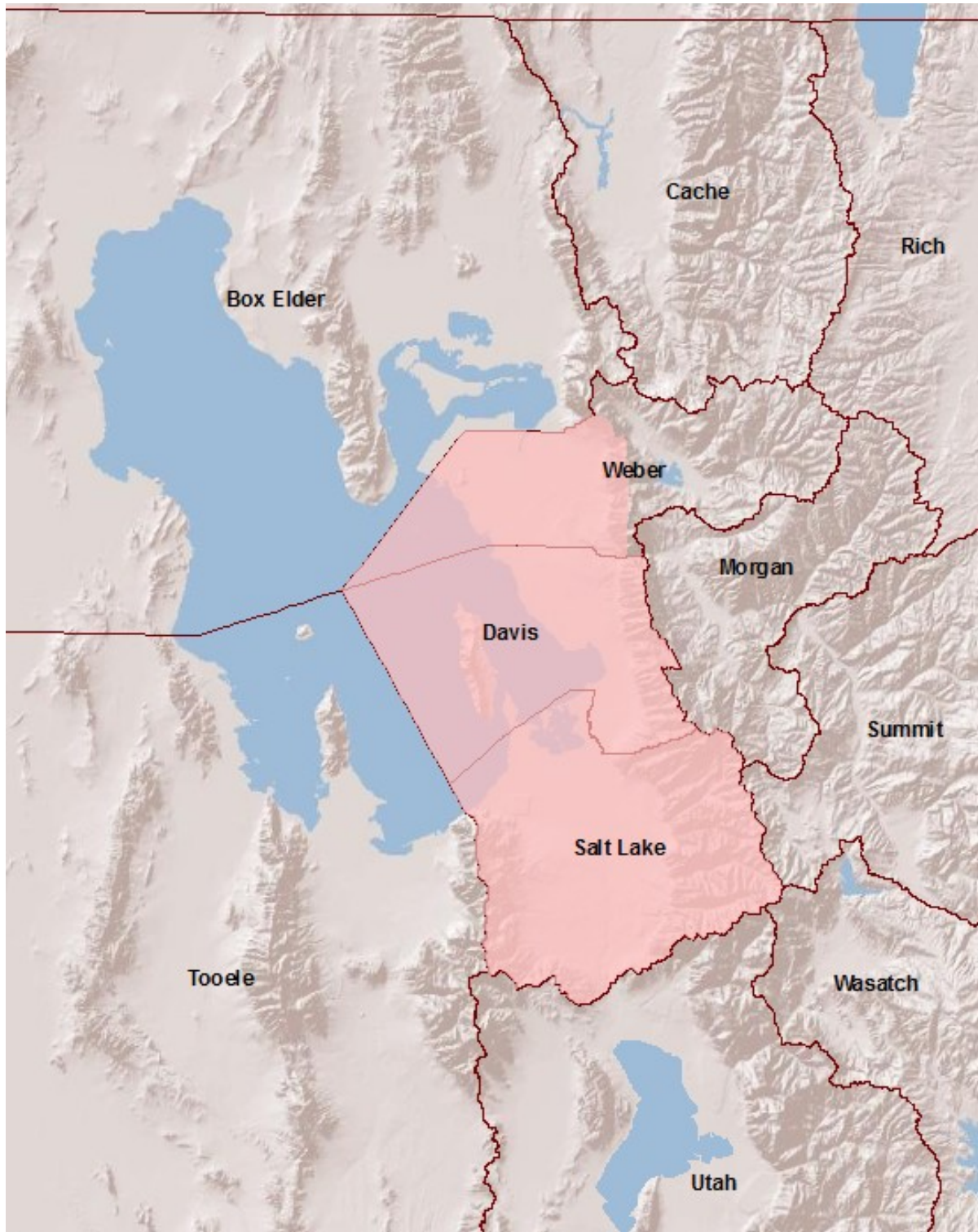


**Figure 3: State of Utah Areas of Non-Attainment for PM-2.5**



**Figure 4: State of Utah Areas of Maintenance for Ozone**





**Figure 5: State of Utah Recommended Areas of Non-Attainment for Ozone**

The current air quality trend at Hill AFB is one of controlling emissions as Hill AFB managers implement programs to eliminate ozone-depleting substances, limit use of volatile organic compounds (VOCs), switch to lower vapor pressure solvents and aircraft fuel, convert internal combustion engines from gasoline and diesel to natural gas, and improve the capture of particulates during painting and abrasive blasting operations (in compliance with the base's Title V air quality permit).

Emission estimates are available for criteria air pollutants and hazardous air pollutants (HAPs) for Hill AFB (Hill 2010) and for Davis and Weber Counties (DAQ 2010b, United States Environmental Protection Agency [EPA] 2010). The estimates, shown below in Table 2, were based on data from calendar year 2009 for Hill AFB, and for calendar year 2005 (still the most recent data available) for Davis and Weber Counties. The county HAP emissions were obtained from EPA, and calendar year 2002 was the most recent year available.

Location	VOC	CO	NOx	PM-10	PM-2.5	HAP	SOx
Hill AFB	267	283	255	57	28	86	5
Davis County	18,082	65,138	10,741	3,863	1,224	2,533	3,483
Weber County	15,592	48,943	6,880	3,011	940	1,951	240

**Table 2: Baseline Criteria Pollutants and HAPs (tons/year)**

Air emissions from the existing facilities are created by vehicle exhaust systems, a portable steam cleaner, solvent usage, a degreasing unit, minor spray painting, a freon recycling unit, and fuel storage. The sum of calendar year 2009 air emissions for all of these sources (CH2M 2010) are shown in Table 3.

Location	VOC	CO	NOx	PM-10	PM-2.5	HAP	SOx
Building 1243	0.06	0.00	0.00	0.00	0.00	0.02	0.00
Building 1253	0.06	0.00	0.00	0.00	0.00	0.03	0.00

**Table 3: Existing Operational Air Emissions (tons/year)**

Additional air emissions from the existing facilities exist from space heating during the winter months. These two buildings are connected to the Hill AFB central steam heating system. The calendar year 2009 air emissions (CH2M 2010) are shown in Table 4.

Heated Area	VOC	CO	NO <sub>x</sub>	PM-10	PM-2.5	HAP	SO <sub>x</sub>
3,707,253 ft <sup>2</sup>	1.2	18.0	21.5	1.6	1.6	0.4	0.1
Buildings 1243 and 1253 (39,000 ft <sup>2</sup> )	0.01	0.2	0.2	0.02	0.02	0.00	0.00

*Notes:*

The central steam plant provides heat for 3,707,253 ft<sup>2</sup> of Hill AFB facilities.

Buildings 1243 and 1253 account for 39,000 ft<sup>2</sup> of the heated area.

Based on summer versus winter month emissions, heating related emissions were prorated as 86 percent of total emissions from the central steam plant.

**Table 4: Existing Air Emissions Due to Heating (tons/year)**

### 3.3.2 Solid and Hazardous Wastes

In general, hazardous wastes include substances that, because of their concentration, physical, chemical, or other characteristics, may present substantial danger to public health or welfare or to the environment when released into the environment or otherwise improperly managed.

Potentially hazardous and hazardous wastes generated at Hill AFB are managed as specified in the *Hill AFB Hazardous Waste Management Plan* with oversight by personnel from the Environmental Management Division and DRMO. Hazardous wastes at Hill AFB are properly stored during characterization, and then manifested and transported off site for treatment and/or disposal.

Non-regulated wastes created within the existing facilities include: office and break room trash; scrap aluminum and steel; drained and crushed oil filters; and small amounts of cardboard, paper, and plastic wrapping in quantities that are insufficient to recycle.

Wastes created within the existing facilities that are either regulated or have the potential to be regulated include the following waste streams.

- Used spray cans (less than one ton per year) are collected. These cans are typically empty or mostly empty. After being punctured, the contents are recycled if possible, and the remaining contents are disposed as hazardous waste. Smaller amounts of other paint-related wastes are treated in a similar fashion.
- Grit is collected from the floor drains (unspecified amount) and parts cleaners (less than one ton per year). Following waste characterization, grit is disposed as either regulated or uncontaminated waste.

- Rags containing oil, brake fluid, transmission fluid, and/or grease are sent to the Hill AFB laundry (1.5 tons per year). Effluent from the laundry facility flows to the Hill AFB industrial wastewater treatment plant prior to being released to the sanitary sewer. Sorbent pads and rags that cannot be laundered (one ton per year) are collected. Following waste characterization, the rags are disposed as either regulated or uncontaminated waste.
- Used motor oil, hydraulic fluid, brake fluid, and transmission fluid (10 tons per year) are recovered for recycling or reuse.
- Off-specification fuel and antifreeze (3 tons per year) are disposed as hazardous waste.
- Spent solvent and sorbent pads related to a solvent-based parts washer (unspecified amounts) are removed by a vendor (currently Safety Kleen) for recycling and/or proper disposal.
- Water from a water-based parts washer, floor drains, and a vehicle wash bay (unspecified amounts) flows through oil-water separators, then to a sanitary sewer. Building restrooms are also connected to the sanitary sewer.

Related to the proposed demolition activities, the potential to encounter shallow soil contamination is most likely at the following locations:

- Building 1132, from a former diesel fuel storage tank,
- Building 1133, from a drain system,
- Building 1141, from a former diesel fuel storage tank,
- Building 1243, from a former gasoline/diesel fuel storage tank, and
- Building 1607, from disposal of waste solvents.

### **3.3.3 Water Quality**

In areas of Hill AFB that are not heavily developed, runoff is allowed to infiltrate into the ground through overland flow or surface ditches, discharging to large unoccupied areas. In developed areas, stormwater is typically conveyed to 14 retention or detention ponds within Hill AFB boundaries.

No surface water bodies are present within the area occupied by the exiting facilities or the area proposed for constructing the new facility. Based on a review of the *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit* (Stantec 2007), storm drains convey surface runoff from this area of Hill AFB (Figure 2) west to Pond 14 (a retention pond). Any water routed to Pond 14 either percolates or evaporates, resulting in zero discharge.

As mentioned in Section 1.7.2, excavations would not approach the groundwater surface. The proposed action would not be located within any DWSP zones (Stantec 2008a, Stantec 2008b).

### **3.4 Description of Relevant Pre-Existing Environmental Factors**

The Wasatch Front Regional Council (WFRC 2003) assessed earthquake hazards for Davis County, Utah, including the portion of Hill AFB that includes the alternatives discussed in this document. The Davis County liquefaction potential map shows this area of Hill AFB to be in the zone labeled as very low risk. The Davis County earthquake hazard map shows this area of Hill AFB to be outside of known fault zones. The Davis County landslide hazard map shows this area of Hill AFB to be outside of known landslide risk zones.

During scoping discussions and subsequent analysis, no other pre-existing environmental factors (e.g., hurricanes, tornados, floods, droughts) were identified for the proposed action.

### **3.5 Description of Areas Related to Cumulative Effects**

For air quality, the area related to cumulative effects would include Hill AFB, Davis County, and Weber County.

For solid and hazardous wastes, the area related to cumulative effects would include Hill AFB.

For water quality, the area related to cumulative effects would include Hill AFB and waters downstream from the Hill AFB stormwater detention ponds.

## 4.0 ENVIRONMENTAL CONSEQUENCES

### 4.1 Introduction

This section discusses effects to the resources that were identified for detailed analysis in Section 1.7.2, and for which existing conditions were presented in Section 3.3. For each of these resources, the following analyses are presented:

- direct, indirect, and cumulative effects of the proposed action (Alternative A); and
- direct, indirect, and cumulative effects of no action (Alternative B).

### 4.2 Predicted Effects to Relevant Affected Resources

#### 4.2.1 Predicted Effects to Air Quality

##### 4.2.1.1 Alternative A (Proposed Action): Construct a New Consolidated Transportation Facility

###### Direct Effects Due to Construction

**Fugitive Dust:** Fugitive emissions from construction activities would be controlled according to UAC Section R307-205, *Emission Standards: Fugitive Emissions and Fugitive Dust* and the Hill AFB *Fugitive Dust Plan*. Good housekeeping practices would be used to maintain construction opacity at less than 20 percent. Haul roads would be kept wet. Any soil that is deposited on nearby paved roads by construction vehicles would be removed from the roads and either returned to the site or placed in an appropriate on-base disposal facility.

**Heavy Equipment:** The internal combustion engines of heavy equipment would generate emissions of VOCs, CO, NO<sub>x</sub>, particulates, HAPs, and oxides of sulfur (SO<sub>x</sub>). Assumptions and estimated emissions for the construction period are listed in Table 5. Additional emissions from heavy equipment used during demolition activities are presented in Table 6.

**Asbestos:** Prior to demolition of any structures, a detailed asbestos survey would be performed by Hill AFB employees and the results incorporated into specifications for the demolition contracts. Each asbestos abatement contractor would be verified by the Hill AFB asbestos shop as qualified to perform regulated asbestos abatement projects, and both the company and individual workers would possess all required certifications to perform the assigned tasks. Prior to beginning any asbestos abatement efforts, a notification of at least 10 working days would be provided to DAQ if required. Because all work would be performed in accordance with standards set by EPA and DAQ, there would be no impacts to air quality associated with asbestos abatement.



Data Assumptions							
Equipment Type	Diesel Emission Factor (lbs/hr)						
	VOC (HC)	CO	NOx	PM10	HAPs	SOx	
Asphalt Paver	0.28	1.24	2.96	0.24	0.05	0.25	
Bobcat Loader	0.14	0.67	1.00	0.10	0.01	0.08	
Cable Plow	0.59	3.75	4.49	0.59	0.08	0.38	
Compressor (boring)	0.25	1.62	1.94	0.25	0.04	0.16	
Concrete Truck	0.80	3.55	8.50	0.69	0.15	0.72	
Crane	2.14	6.96	17.08	2.39	0.33	1.54	
Dump Truck	0.63	2.04	6.98	0.58	0.16	0.65	
Flat Bed Truck	0.48	1.54	5.29	0.44	0.12	0.49	
Fork Lift	0.42	2.47	1.98	0.40	0.05	0.23	
Generator	0.02	0.10	0.12	0.02	0.00	0.01	
Loader/Backhoe	0.87	4.12	6.12	0.64	0.06	0.52	
Motored Grader	0.83	2.01	5.08	0.53	0.06	0.46	
Scraper	0.33	2.31	4.03	0.58	0.13	0.42	
Track Hoe	0.91	6.65	13.75	1.84	0.26	1.19	
Vibratory Compactor	0.38	1.44	4.31	0.36	0.09	0.46	
Water Truck	1.10	3.58	12.28	1.02	0.28	1.14	
Wheeled Dozer	0.46	1.48	5.08	0.35	0.08	0.49	
Note: VOCs = Hydrocarbons and HAPs = Aldehydes							
Source: Industry Horsepower Ratings and EPA 460/3-91-02							
Construct Consolidated Transportation Facility							
EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	490	137.2	607.6	1450.4	117.6	24.5	122.5
Bobcat Loader	190	26.6	127.3	190.0	19.0	1.9	15.2
Cable Plow	20	11.8	75.0	89.8	11.8	1.6	7.6
Compressor (boring)	10	2.5	16.2	19.4	2.5	0.4	1.6
Concrete Truck	50	40.0	177.5	425.0	34.5	7.5	36.0
Crane	190	406.6	1322.4	3245.2	454.1	62.7	292.6
Dump Truck	20	12.6	40.8	139.6	11.6	3.2	13.0
Flat Bed Truck	20	9.6	30.8	105.8	8.8	2.4	9.8
Fork Lift	20	8.4	49.4	39.6	8.0	1.0	4.6
Generator	90	1.8	9.0	10.8	1.8	0.0	0.9
Loader/Backhoe	320	278.4	1318.4	1958.4	204.8	19.2	166.4
Motored Grader	350	290.5	703.5	1778.0	185.5	21.0	161.0
Scraper	50	16.5	115.5	201.5	29.0	6.5	21.0
Track Hoe	400	364.0	2660.0	5500.0	736.0	104.0	476.0
Vibratory Compactor	20	7.6	28.8	86.2	7.2	1.8	9.2
Water Truck	15	16.5	53.7	184.2	15.3	4.2	17.1
Wheeled Dozer	15	6.9	22.2	76.2	5.3	1.2	7.4
TOTAL ESTIMATED EMISSIONS (lbs)		1637.5	7358.1	15500.1	1852.8	263.1	1361.9
TOTAL ESTIMATED EMISSIONS (tons)		0.82	3.68	7.75	0.93	0.13	0.68

Hours of use based on estimates from Steve Weed, Hill AFB Engineering

**Table 5: Calculated Heavy Equipment Emissions for New Construction**

Data Assumptions							
Equipment Type	Diesel Emission Factor (lbs/hr)						
	VOC (HC)	CO	NOx	PM10	HAPs	SOx	
Asphalt Paver	0.28	1.24	2.96	0.24	0.05	0.25	
Bobcat Loader	0.14	0.67	1.00	0.10	0.01	0.08	
Cable Plow	0.59	3.75	4.49	0.59	0.08	0.38	
Compressor (boring)	0.25	1.62	1.94	0.25	0.04	0.16	
Concrete Truck	0.80	3.55	8.50	0.69	0.15	0.72	
Crane	2.14	6.96	17.08	2.39	0.33	1.54	
Dump Truck	0.63	2.04	6.98	0.58	0.16	0.65	
Flat Bed Truck	0.48	1.54	5.29	0.44	0.12	0.49	
Fork Lift	0.42	2.47	1.98	0.40	0.05	0.23	
Generator	0.02	0.10	0.12	0.02	0.00	0.01	
Loader/Backhoe	0.87	4.12	6.12	0.64	0.06	0.52	
Motored Grader	0.83	2.01	5.08	0.53	0.06	0.46	
Scraper	0.33	2.31	4.03	0.58	0.13	0.42	
Track Hoe	0.91	6.65	13.75	1.84	0.26	1.19	
Vibratory Compactor	0.38	1.44	4.31	0.36	0.09	0.46	
Water Truck	1.10	3.58	12.28	1.02	0.28	1.14	
Wheeled Dozer	0.46	1.48	5.08	0.35	0.08	0.49	
Note: VOCs = Hydrocarbons and HAPs = Aldehydes							
Source: Industry Horsepower Ratings and EPA 460/3-91-02							
Demolish Buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243, 1251, 1253, 1607							
EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver		0.0	0.0	0.0	0.0	0.0	0.0
Bobcat Loader	194	27.2	130.0	194.0	19.4	1.9	15.5
Cable Plow		0.0	0.0	0.0	0.0	0.0	0.0
Compressor (boring)		0.0	0.0	0.0	0.0	0.0	0.0
Concrete Truck		0.0	0.0	0.0	0.0	0.0	0.0
Crane		0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	375	236.3	765.0	2617.5	217.5	60.0	243.8
Flat Bed Truck		0.0	0.0	0.0	0.0	0.0	0.0
Fork Lift		0.0	0.0	0.0	0.0	0.0	0.0
Generator		0.0	0.0	0.0	0.0	0.0	0.0
Loader/Backhoe	350	304.5	1442.0	2142.0	224.0	21.0	182.0
Motored Grader	190	157.7	381.9	965.2	100.7	11.4	87.4
Scraper		0.0	0.0	0.0	0.0	0.0	0.0
Track Hoe		0.0	0.0	0.0	0.0	0.0	0.0
Vibratory Compactor		0.0	0.0	0.0	0.0	0.0	0.0
Water Truck	189	207.9	676.6	2320.9	192.8	52.9	215.5
Wheeled Dozer		0.0	0.0	0.0	0.0	0.0	0.0
TOTAL ESTIMATED EMISSIONS (lbs)		933.5	3395.5	8239.6	754.4	147.3	744.1
TOTAL ESTIMATED EMISSIONS (tons)		0.47	1.70	4.12	0.38	0.07	0.37

Hours of use based on estimates from Steve Weed, Hill AFB Engineering

**Table 6: Calculated Heavy Equipment Emissions for Demolition**

Direct Effects Due to Operations

Based on information received from the project proponent and during the scoping meeting held on August 4, 2010, air emissions due to operating the proposed action would be the same as are being generated in the existing facilities (see Table 3). Based on discussions with the MILCON project programmer, space heating during the winter months would be provided by an on-site natural gas fired heating system. Calculated air emissions for space heating are shown in Table 7. These values are slightly higher than the values presented in Table 4 for the existing facilities.

<b>Data Assumptions</b>						
<b>Equipment Type</b>	<b>Natural Gas Emission Factor (pounds/MMSCF)</b>					
	<b>VOC</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>HAPs</b>	<b>SOx</b>
Natural Gas Furnace	5.5	40.0	94.0	7.6	0.01	0.6
<b>Conversion Factors</b>						
	<b>Calculate Annual Fuel Consumption</b>					
	65,000	65,000	65,000	65,000	65,000	65,000
Square Feet	65,000	65,000	65,000	65,000	65,000	65,000
BTU per hour per square foot	19	19	19	19	19	19
Heating hours per year	5,000	5,000	5,000	5,000	5,000	5,000
Million BTU per year	6,175	6,175	6,175	6,175	6,175	6,175
MMSCF per year	6.0	6.0	6.0	6.0	6.0	6.0
<b>Operate Consolidated Transportation Facility</b>						
<b>Equipment Type</b>	<b>Natural Gas Emissions (pounds)</b>					
	<b>VOC</b>	<b>CO</b>	<b>NOx</b>	<b>PM10</b>	<b>HAPs</b>	<b>SOx</b>
Natural Gas Furnace	33	240	565	46	0.1	4
<b>TOTAL ESTIMATED EMISSIONS (pounds/year)</b>	33	240	565	46	0.1	4
<b>TOTAL ESTIMATED EMISSIONS (tons/year)</b>	0.02	0.12	0.28	0.02	0.00	0.00

*Notes:*

MMSCF = Million Standard Cubic Feet, and BTU = British Thermal Unit

1 cubic foot natural gas = 1,028 BTU

Source: [http://www.eia.doe.gov/kids/energyfacts/science/energy\\_calculator.html#natgascalc](http://www.eia.doe.gov/kids/energyfacts/science/energy_calculator.html#natgascalc)

Office Space (as opposed to warehouse space): 15-45 BTU per hour per square foot

There are approximately 5,000 heating hours in an average year

Source: Dale R. Scott, P.E., SAIN Engineering Associates, Inc., 75 CES/CEOSEE, Hill AFB, UT

Assume 30 BTU per hour per square foot for new construction, offices

Warehouses use approx. 63 percent compared to offices, = 19 BTU per hour per square foot

<http://www.eia.doe.gov/emeu/consumptionbriefs/cbecs/pbawebbsite/summarytable.htm>

Emission factors: EPA values for residential furnaces

For natural gas, SOx assumed equal to SO2

**Table 7: Calculated Air Emissions Due to Space Heating**

If required, prior to operating the proposed action, Hill AFB air quality managers would submit notices of intent, seven day notifications, and modification requests to DAQ. Hill AFB would not be allowed to operate the facilities until DAQ concurs that federal and state requirements are being met.

*Conformity Applicability Determination*

Due to local non-attainment status, a conformity applicability determination (compliant with 40 CFR 93.153 and UAC R-307-115) was completed for the proposed action. The proposed action would be required to demonstrate conformity with the CAA unless an applicability determination shows that it is exempt from conformity, in this case, due to having annual emissions below the thresholds established in 40 CFR 93.153(b)(1) and (b)(2). Predicted air emissions due to construction and due to operations were all much less than the established threshold values.

### Indirect Effects

During scoping and the detailed analysis, no indirect effects related to air quality were identified for the proposed action.

### Cumulative Effects

**Construction:** Construction-related air emissions would be limited to a duration of several months. Comparing the magnitude of predicted construction-related air emissions (Tables 5 and 6) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), there would not be significant cumulative effects to air quality associated with constructing the proposed action.

**Operations:** Hill AFB air quality managers would ensure that long-term operation of the proposed action complies with the Hill AFB Title V Permit, any relevant approval orders, EPA regulations, and the Utah SIP. Any required air quality control devices would be installed and tested prior to allowing newly installed equipment to begin operating. Comparing the magnitude of predicted operational air emissions (Table 3, Table 7) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), no significant cumulative effects to air quality were identified for operating the proposed action.

#### **4.2.1.2 Alternative B: No Action**

Existing air emissions as explained in Section 3.3.1 would continue. The no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

### **4.2.2 Predicted Effects to Solid and Hazardous Waste**

#### **4.2.2.1 Alternative A (Proposed Action): Construct a New Consolidated Transportation Facility**

### Direct Effects Due to Construction

**Waste Generation:** During the proposed construction activities, solid wastes expected to be generated would be construction debris consisting mainly of concrete, metal, and building materials. These items would be treated as uncontaminated trash and recycled when feasible. Any paint on pavements being removed would be tested for lead-based paint content. (see waste management below). It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. In the event of a spill of regulated materials, Hill AFB environmental managers and their contractors would comply with all federal, state, and local spill reporting and cleanup requirements.

**Demolition Debris:** Any asbestos detected during the detailed asbestos survey and subsequently removed during an abatement action would be disposed in accordance with permit requirements at a disposal facility that is approved to accept both friable and non-friable asbestos. Loose flakes of lead-based paint (confirmed to contain lead by on-site inspections using a portable X-ray fluorescence analyzer) would be scraped, collected, and properly disposed at a permitted hazardous waste disposal facility. Dielectric fluid from any transformers or light ballasts suspected of containing PCBs would be tested, and the equipment would be properly disposed as

either a regulated waste (PCB content of 50 parts per million [ppm] or more) or as uncontaminated trash (PCB content less than 50 ppm).

The uncontaminated demolition debris and lead-based paint that is still affixed to surfaces would all be disposed off base at a local construction debris (Class VI) landfill. Class VI landfills are allowed to accept construction and demolition waste, including: lead-based paint that is still affixed to surfaces and a quantity of 10 PCB-containing light ballasts per structure.

Thermostats that contain mercury switches would be collected by technicians from the Hill AFB facility systems flight (75 CES/CEOFSH) prior to demolition activities. Any thermostats not saved for local reuse would be delivered to DRMO, which has an office on Hill AFB. DRMO would send the thermostats to be recycled, and a waste stream would not be created.

Any asphalt pavements surrounding the structures would be removed, collected, and would either be recycled, or stored and made available for reuse during future Hill AFB construction projects.

***Waste Management:*** Hill AFB personnel have specified procedures for handling construction-related solid and hazardous wastes in their engineering construction specifications. The procedures are stated in Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection. All solid non-hazardous waste is collected and disposed or recycled on a routine basis. Hazardous wastes are stored at sites operated in accordance with the requirements of 40 CFR 265. The regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Suspect waste is labeled as hazardous waste and is safely stored while analytical results are pending or until sufficient generator knowledge is obtained. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.

***Excavated Soils:*** There is no known soil contamination at the location of the proposed action. However, excavations could potentially encounter contaminated soil, as explained in Section 3.3.2. If unusual odors or soil discoloration were to be observed during any excavation or trenching necessary to complete the proposed action, the soil would be stored on plastic sheeting and the Hill AFB Environmental Restoration Branch (75 CEG/CEVR) would be notified. Any excess clean soil would either be used as fill for another on-site project or placed in the Hill AFB landfill. Any soil determined to be hazardous would be eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. No soil would be taken off base without prior 75 CEG/CEVR written approval.

#### *Direct Effects Due to Operations*

Based on information received during the scoping meeting held on August 4, 2010 and subsequent discussions with the proponent, the types of solid and hazardous wastes to be generated due to operating the proposed action would be the same as for the existing facilities.

#### *Indirect Effects*

During scoping and the detailed analysis, no indirect effects related to solid and hazardous waste were identified for the proposed action.

### Cumulative Effects

Proper handling of solid and hazardous waste eliminates releases of contaminants to the environment or reduces such releases in conformity with legal limits. There would be no significant cumulative solid or hazardous waste effects associated with the proposed action.

#### **4.2.2.2 Alternative B: No Action**

Under the no action alternative, the wastes discussed in Section 3.3.2 would continue to be generated. With respect to solid and hazardous waste, the no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

### **4.2.3 Predicted Effects to Water Quality**

#### **4.2.3.1 Alternative A (Proposed Action): Construct a New Consolidated Transportation Facility**

##### Direct Effects Due to Construction

Based on information provided by Hill AFB engineers, the land area to be disturbed by the proposed facility would be approximately seven acres in size. The proposed action would be covered under Utah's general construction permit rule for stormwater compliance. Prior to initiating any construction activities, this permit must be obtained and erosion and sediment controls must be installed according to a stormwater pollution prevention plan (SWPPP). The SWPPP would specify measures to prevent soil from leaving the construction site on the wheels of construction vehicles, thereby controlling the addition of sediments to the storm drain system. The proponents would coordinate with the Hill AFB water quality manager (75CEG/CEVC) prior to submitting an application for a Utah construction stormwater permit.

Design engineers would ensure that components of the existing stormwater collection system would not be damaged, by avoiding or relocating the relevant structures. Hill AFB construction specifications would require the contractor to restore the land to a non-erosive condition. All areas disturbed by excavation would be backfilled, and then either be covered by pavements, gravel, or re-planted, re-seeded, or sodded to prevent soil erosion.

Since the proposed action would convert a small area occupied by open land to impermeable surfaces, some increased stormwater runoff volume would be expected unless runoff controls were to be created during construction of the facility. EISA Section 438 specifies stormwater runoff requirements for federal development projects. The sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 ft<sup>2</sup> must ensure that all precipitation from the 95th percentile, 24-hour storm event is retained on site (for Hill AFB, this storm depth is 0.8 inches [Zautner 2010]). Compliance with this requirement (by designing and constructing detention and/or retention structures) would eliminate downstream effects due to creating impermeable surfaces.

Depth to groundwater is at least 25 feet bgs in the vicinity of proposed demolition activities, and 40 feet bgs for the proposed consolidated transportation facility. Since the proposed action

would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities), no direct groundwater effects were identified for the proposed action.

#### Direct Effects Due to Operations

The proposed facility would be subject to Utah's multi-sector general permit for industrial facilities. The *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit* establishes good housekeeping measures and other best management practices to prevent contamination of runoff.

#### Indirect Effects

As discussed in Section 3.3.3, the proposed action would not be located within a DWSP area. Nonetheless, potential contamination sources such as oil and grease from vehicles, and agricultural chemicals from landscaped areas would be controlled. Facility design and operating standards would be based on good housekeeping measures such as street sweeping and controlling litter, and other best management practices such as cleaning, inspecting, and maintaining the stormwater collection system.

#### Cumulative Effects

Water quality would be protected during and after construction activities. There would be no significant cumulative water quality effects associated with the proposed action.

#### **4.2.3.2 Alternative B: No Action**

With respect to water quality, the no action alternative would have no direct effects, no indirect effects, and no cumulative effects.

### 4.3 Summary Comparison of Predicted Environmental Effects

This section only applies to the alternatives considered in detail.

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	<p>Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled.</p> <p>Air emissions from operations would be less than 0.3 tons per year for each criteria pollutant as well as for HAPs.</p> <p>Conformity with the Clean Air Act was demonstrated.</p>	<p>Existing air emissions are 0.2 tons per year or less for each criteria pollutant as well as for HAPs.</p>
Solid and Hazardous Waste	<p>If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.</p>	<p>Non-regulated wastes are collected and disposed. Various regulated wastes are collected, stored, analyzed if necessary, and either recycled or disposed in accordance with federal and state regulations.</p>
Water Quality	<p>During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.</p>	<p>Good housekeeping measures and other best management practices are being followed.</p>

**Table 8: Summary Comparison of Predicted Environmental Effects**



## **5.0 LIST OF PREPARERS**

### Streamline Consulting, LLC

1713 N. Sweetwater Lane, Farmington UT 84025

Randal B. Klein, P.E., Project Manager, (801) 451-7872

### Civil Engineer Group, Environmental Division, 75 CEG/CEV

7274 Wardleigh Road, Hill AFB UT 84056

Sam Johnson, Environmental Impact Analysis Process Manager, (801) 775-3653

### EMAssist, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Mark Kaschmitter, Air Regulatory Analysis, (801) 775-2359

### CH2M HILL, Inc.

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### Select Engineering Services

7274 Wardleigh Road, Hill AFB UT 84056

Michelle Fellows, Historic Building Status, (801) 586-2464

## **6.0 LIST OF PERSONS AND AGENCIES CONSULTED**

### Civil Engineer Group, Environmental Division, 75 CEG/CEV

7274 Wardleigh Road, Hill AFB UT 84056

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Jaynie Hirschi, Archaeologist, (801) 775-6920

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Glenn Palmer, Air Quality Manager, (801) 775-6918

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### Civil Engineer Organizations, 75 CEG and 75 CES

5713 Lahm Lane, Building 593N, Hill AFB UT 84056

Steven Weed, MILCON Project Programmer, (801) 777-2580

Troye Davis, Asbestos Shop Supervisor, (801) 586-7094

Jeff Meyer, Electrical Superintendent, (801) 586-6557

### Vehicle Management Flight, 75 LRS/LCRV

Building 1253, Hill AFB UT 84056

Todd Esler, Flight Chief, (801) 777-9170

Darsi Crane, Unit Environmental Coordinator, (801) 777-9170

## 7.0 REFERENCES

**CFR:** *Code of Federal Regulations*, US Government Printing Office, Office of the Federal Register (various sections and dates).

**CH2M 2010:** Spreadsheet provided by Hill AFB contractor CH2M HILL, September, 2010.

**DAQ 2007:** *Utah's Area Designation Recommendation for the 2006 PM<sub>2.5</sub> NAAQS*, Utah Division of Air Quality, December, 2007.

**DAQ 2010a:** *State of Utah National Ambient Air Quality Standards, Areas of Non-Attainment and Maintenance (Updated March 2010)*, Utah Division of Air Quality Website, March, 2010.

**DAQ 2010b:** *Division of Air Quality Annual Report for 2009*, Utah Division of Air Quality, January, 2010.

**EPA 1991:** *Nonroad Engine and Vehicle Emission Study - Report*, Table 2-07a, US Environmental Protection Agency, 1991.

**EPA 2010:** *County Emissions Report - Hazardous Air Pollutants*, EPA, June, 2010.

**Hill AFB:** *Construction Specifications, Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection*, Hill AFB, current version.

**Hill 2004:** *Memorandum of Agreement Between the United States Air Force and the Utah State Historic Preservation Officer Pursuant to 36 CFR §800 Regarding Demolition of Historic Buildings, Explosives Clear Zone Area, Hill Air Force Base, Utah*, Hill AFB, August, 2004.

**Hill 2005b:** *Memorandum of Agreement Between the United States Air Force and the Utah State Historic Preservation Officer Pursuant to 36 CFR Section 800 Regarding the Demolition of Five 800-Zone Historic Buildings, Hill Air Force Base, Utah*, Hill AFB, March, 2005.

**Hill 2007a:** *Integrated Cultural Resources Management Plan*, Hill AFB, 2007.

**Hill 2007b:** *Integrated Natural Resources Management Plan*, Hill AFB, 2007.

**Hill 2008:** *Memorandum of Agreement Between the United States Air Force, Sunset Ridge Development Partners, and the Utah State Historic Preservation Officer, Regarding the Proposed Enhanced Use Lease Project, West Side Development Hill Air Force Base, Utah*, Hill AFB, June, 2008.

**Hill 2009:** *Consolidated Transportation Facility Phase 1*, Hill AFB, June, 2009.

**Hill 2010:** *2009 Annual Criteria and Toxic Pollutant Emission Inventory*, Hill AFB, prepared by CH2M HILL, April, 2010.

**Ogden 2009:** *Hill AFB Utah Consolidated Transportation Facility Economic Analysis*, Ogden Air Logistics Center, June, 2009.

**Stantec 2007:** *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit*, Stantec Consulting, April, 2007.

**Stantec 2008a:** *Drinking Water Source Protection Plan, Hill Air Force Base Well 5*, Stantec Consulting, updated May, 2008.

**Stantec 2008b:** *Drinking Water Source Protection Plan, Hill Air Force Base Well 8*, Stantec Consulting, updated May, 2008.

**UGS 1994a:** *Earthquake Ground Shaking in Utah*, Utah Geological Survey, 1994.

**UGS 1994b:** *Liquefaction Potential for a Part of Weber County, Utah*, Utah Geological Survey, 1994.

**UGS 2009:** *Earthquake Fault Map of a Portion of Weber County, Utah*, Utah Geological Survey, current on website as of March, 2009.

**USAF 2010:** *Form 1391, Consolidated Transportation Facility Phase 1*, USAF, January, 2010.

**WFRC 2003:** *Natural Hazard Pre-Disaster Mitigation Plan, Utah's Wasatch Front*, Wasatch Front Regional Council, December, 2003.

**Zautner 2004:** *Hill AFB 95th Percentile 24-hour Precipitation Amount*, Jeffrey H. Zautner, Meteorologist, Air Force Combat Climatology Center, June 10, 2010.

APPENDIX A

CULTURAL RESOURCES FINDING OF NO ADVERSE EFFECT





## State of Utah

GARY R. HERBERT  
*Governor*

GREG BELL  
*Lieutenant Governor*

## Department of Community and Culture

MICHAEL HANSEN  
*Acting Executive Director*

### State History

PHILIP F. NOTARIANNI  
*Division Director*

December 1, 2010

Mr. Robert T. Elliott  
Chief, Environmental Management Division  
75th CED/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

RE: Demolition of Buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243-, 1251, 1253 and 1607

In reply please refer to Case No. 10-1845

Dear Mr. Elliott:

The Utah State Historic Preservation Office received information and your request for our comment on the above-referenced project on November 17, 2010. We offer the following comments:

Based on the information provided to our office, we concur with the finding of No Adverse Effect for the proposed undertaking. We do note that although historic buildings will be affected by the action, we have previously consulted, mitigated, and resolved them through memorandums of agreement as indicated in your letter.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have any questions, please contact me at [clhansen@utah.gov](mailto:clhansen@utah.gov) or (801) 533-3561.

Regards,

Chris Hansen  
Preservation Planner

UTAH STATE  
HISTORY

UTAH STATE HISTORICAL SOCIETY  
ANTIQUITIES  
HISTORIC PRESERVATION  
RESEARCH CENTER & COLLECTIONS

300 S. RIO GRANDE STREET, SALT LAKE CITY, UT 84101-1182 · TELEPHONE 801 533-3500 · FACSIMILE 801 533-3503 · HISTORY.UTAH.GOV



DEPARTMENT OF THE AIR FORCE  
75TH CIVIL ENGINEER GROUP (AFMC)  
HILL AIR FORCE BASE UTAH

10 November 2010

Mr. Robert T. Elliot  
Chief, Environmental Management Division  
75th CEG/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

Mr. Chris Hansen  
State Historic Preservation Office  
300 Rio Grande  
Salt Lake City, UT 84101

Dear Mr. Hansen

Hill Air Force Base (AFB) is currently proposing to construct a consolidated transportation facility. The proposed action is needed to provide adequate facilities for vehicle maintenance and repair operations. The existing transportation facilities are World War II era buildings that were not intended to be used for their current purposes and do not meet minimum worker safety standards. The Area of Potential Effect (APE) is approximately 6.63 acres (Attachment 1).

The proposed action would include demolition of buildings 1132, 1133, 1138, 1141, 1153, 1240, 1241, 1243, 1251, 1253, and 1607. Buildings 1132, 1133, 1138, 1141, and 1243 were mitigated for transfer in 2008 through the West Side Development Enhanced Use Lease Memorandum of Agreement (MOA) (Attachment 2). Building 1607 was mitigated for demolition in 2004 through the Explosives Clear Zone MOA (Attachment 3). Building 1153 is considered an element of infrastructure and therefore requires no further evaluation. Buildings 1240, 1241, and 1251 are not yet historic. Building 1253 has been determined ineligible for listing in the National Register of Historic Places (NRHP) due to lack of architectural integrity (SHPO Case No. 08-0579, Hill AFB Evaluations and Inventories 2008).

Within Hill AFB, three previous inventories have comprised cultural resources survey of 840 acres (U-91-WC-687m, U-95-WC-280p, and U-01-HL-0164m). Results from these projects include the recordation of one historic refuse dump (42Dv51) and two prehistoric isolates, all determined ineligible for listing in the NRHP. Inventory efforts have resulted in the survey of 12.5 percent of the total area of Hill AFB. None of the previous inventories fall within the APE of the current proposed project.

Building construction and associated infrastructure will encompass the entire APE of the current project. Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for archaeological historic properties is extremely low. However, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be

notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 4).

Hill AFB has determined the proposed project will have no adverse effect to historic properties [36 CFR §800.4(d)(1)]. I request your concurrence in these determinations as specified in 36 CFR §800.

An Environmental Assessment has been prepared for the proposed consolidated transportation facility construction. If you would like a copy of this document to review, or should you or your staff have any questions about the project, please contact our archaeologist, Ms. Jaynie Hirschi, 75th CEG/CEVP, at (801) 775-6920 or at [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil).

Sincerely

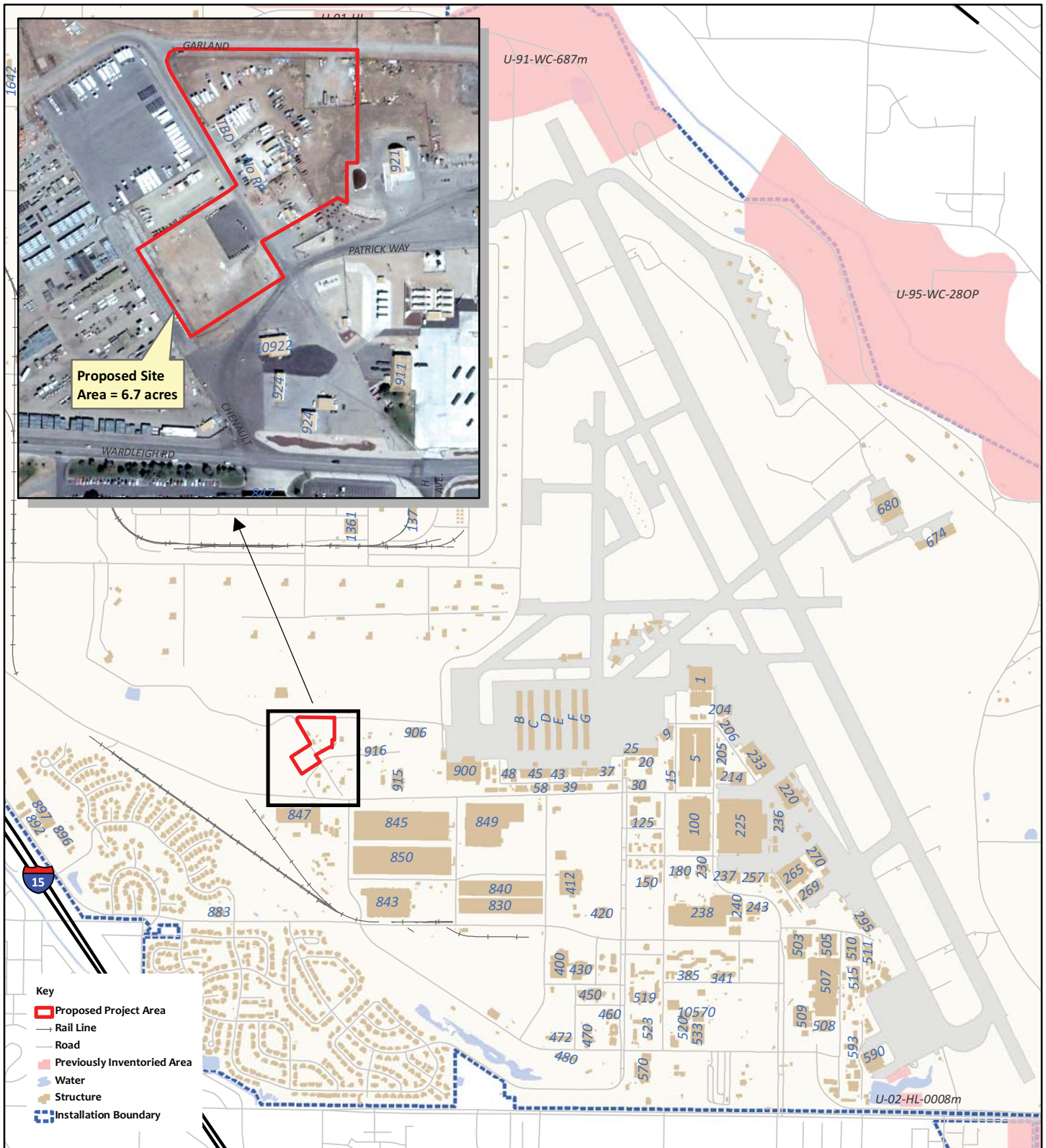
A handwritten signature in black ink, appearing to read "Robert Elliott", with a stylized, flowing script.

ROBERT T. ELLIOTT, P.E., GS-14, DAF  
Chief, Environmental Management Division  
75th Civil Engineer Group

Attachments:

1. Area of Potential Effect for Proposed Consolidated Transportation Facility, Hill Air Force Base, Utah
2. West Side Development Enhanced Use Lease MOA-Hill AFB, UT, w/o attachments
3. Explosive Control Zone (ECZ) MOA-Hill AFB, UT, w/o attachments
4. Unanticipated Discovery of Archaeological Deposits





**MEMORANDUM OF AGREEMENT  
BETWEEN  
THE UNITED STATES AIR FORCE,  
SUNSET RIDGE DEVELOPMENT PARTNERS, AND  
THE UTAH STATE HISTORIC PRESERVATION OFFICER,  
REGARDING THE PROPOSED ENHANCED USE LEASE PROJECT,  
WEST SIDE DEVELOPMENT  
HILL AIR FORCE BASE, UTAH**

**WHEREAS**, the United States Air Force (Air Force) proposes to undertake Enhanced Use Leasing (EUL) at Hill Air Force Base, Utah (Hill AFB) (hereinafter, the “Undertaking”) pursuant to Title 10, U.S.C. Section 2667, Leases: Non-Excess Property of Military Departments; and

**WHEREAS**, under EUL, 168 buildings located on the west side of Hill AFB and all above-ground improvements within this area (Attachment 1, Proposed Enhanced Use Lease Area) will ultimately be transferred by way of a ground lease to a Private Real Estate Developer, Sunset Ridge Development Partners, LLC (hereinafter, the “Developer”) for demolition.

**WHEREAS**, The EUL provides the opportunity for Hill AFB to capitalize on underutilized assets, including real property, by leasing land to the Developer for the purpose of redevelopment of these assets. The EUL is expected to result in the transfer of long-term interests in Federal lands, renovation, and modernization of the area; and

**WHEREAS**, Hill AFB has determined the EUL constitutes a potential adverse effect to 51 of the 168 buildings under EUL that have been determined eligible for the National Register of Historic Places (NRHP) as contributing elements to the Ogden Arsenal/Ogden Air Materiel Area (AMA) Historic District (Attachment 2, Adversely Affected Historic Properties), and Hill AFB has consulted with the Utah State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended (16 U.S.C. 470f) and its implementing regulations found at 36 CFR § 800;

**WHEREAS**, under provisions of 36 CFR § 800.6(a), Hill AFB has notified the Advisory Council on Historic Preservation (ACHP) and federally recognized American Indian Tribes (listed in Attachment 3) and these parties have chosen not to be signatories to this MOA;

**WHEREAS**, Hill AFB, in consultation with the Developer and the SHPO, and after consideration of Hill AFB requirements as well as public benefit, has determined an appropriate mitigation that will be pursued;

**WHEREAS**, the Parties understand that this MOA is based on the unique circumstances of the proposed Undertaking at Hill AFB, and does not constitute an agreement by the Air Force to enter into similar obligations in other Air Force EUL projects;





**NOW, THEREFORE,** Hill AFB, the Developer, and the SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to mitigate the adverse effects caused by the Undertaking.

**THE AIR FORCE SHALL INSURE THAT THE FOLLOWING MEASURES ARE CARRIED OUT:**

**STIPULATIONS**

- 1. PHOTOGRAPHS/DRAWINGS:** Photographs are required of representative types of the adversely affected buildings cited for transfer in Attachment 2. It is hereby confirmed that an adequate number of professional quality black and white negative photographs, in archival stable protective storage pages, along with associated as-built drawings and architectural elevations have been submitted to the SHPO. Photographs are numbered and labeled with the address and the date that the photographs were taken, and these photographs are keyed to a floor plan and site map. It shall be noted that if additional documentation is necessary, it will be provided by Hill AFB, and the photographs, as-built drawings, and architectural elevations will first be screened by Hill AFB Security Personnel, and any particular information will not be publicly released if doing so would create an unreasonable security risk or violates any valid Federal security law or regulation.

Additionally, an adequate number of high quality digital photographs and their associated as-built drawings, and architectural elevations detailing all areas to be impacted by the Undertaking shall be posted by Hill AFB on the Hill AFB Public Outreach Website (Website). Photographs, as-built drawings, and architectural elevations proposed for inclusion in the Website will first be screened by Hill AFB Security Personnel and any particular information will not be publicly released if doing so would create an unreasonable security risk or violates any valid Federal security law or regulation. Classified or national security sensitive information, if any, regarding building design or function shall not be posted in violation of Federal law. Any information posted to the Website is subject to future removal if valid Federal security laws or regulations change in the future and such law or regulation prohibits such posting.

- 2. INTENSIVE LEVEL SURVEY (ILS) FORM:** SHPO agrees that a SHPO ILS form has been completed according to basic survey standards for a representative type of each adversely affected building and submitted to the SHPO by Hill AFB.

Additionally, portions of the Utah State Historic Site Form shall be posted by Hill AFB with the corresponding photographs, as-built drawings, and architectural elevations on the Website. While the entire site form will not be posted, the most relevant portions of the site form, Parts 4 and 5, Architectural Description and History, will be posted together with photographs, as-built drawings, and

architectural elevations subject to the security restrictions cited above in Section 1.

- 3. HISTORIC BUILDING PRESERVATION:** The Hill AFB historic barracks and chapel (Buildings 1961 and 1962) will be relocated and rehabilitated as indicated in Attachment 4 to mitigate the Undertaking (Attachment 4, Proposed Relocation and Rehabilitation of Buildings 1961 and 1962). Their relocation will be within the grounds of the Hill Aerospace Museum, outside the EUL redevelopment area, and they will still be accessible to the general public. The Developer will be responsible for all incurred costs of relocation and rehabilitation; Hill AFB will be responsible for all future upkeep and maintenance of the two buildings as real property. Building 1961 was constructed as part of Hill Field in 1942; its original purpose is unknown. Currently, it is being used as an interpretive display depicting a barracks and quartermaster's office. It is a simple, one-story, wood-frame building. In 1986, it was relocated, along with Building 1962, to Heritage Park adjacent to the Hill Aerospace Museum.

Building 1962 is the original base chapel, completed in 1943. The design was based on a standard for regimental chapels and categorize as a semi-permanent building. It is a one-story, wood-frame structure with a pitched roof and a steeple. Services were held in the chapel until 1964, after which all religious services were held in a newly completed chapel. It was used as an education building and for additional office space until 1985, when it was scheduled for demolition. Because of its importance as a center for religious and social activity, the Air Force Heritage Foundation obtained permission to relocate the building to Heritage Park. Today, the chapel houses commemorative plaques and other permanent memorials to individuals, military units, and veteran organizations.

Because both buildings were moved from their original locations, are temporary-type structures, and are not associated with an historic person or event, both were determined ineligible for the National Register of Historic Places (NRHP). Although they were determined ineligible for the NRHP, they are significant to a large population on Hill AFB and the surrounding area and are used for a variety of events. These two buildings are available to the public, and along with the Hill Aerospace Museum, will serve as an anchor to provide a focal point for future development in the area. The proposed rehabilitation of the two buildings will use the design of the original structures to guide the work, and all work will follow the Secretary of Interior Standards for Rehabilitation of Historic Buildings, helping to restore the historic character of the buildings and maintaining them for the long-term.

- 4. HISTORIC BUILDING RECORDATION:** Because the Ogden Arsenal/Ogden AMA Historic District on Hill AFB land outside the EUL area will possibly be adversely affected by the Undertaking, 97 buildings eligible as contributing elements to the Ogden Arsenal/Ogden AMA Historic District but not included in the EUL area will be re-evaluated to determine their NRHP status. In



addition, Utah State Historic Site Forms associated with this re-evaluation, along with Utah State Historic Site Forms for previously evaluated historic buildings on Hill AFB will be entered into the Utah SHPO Historic Buildings Access database. The Developer will be responsible for all incurred costs.

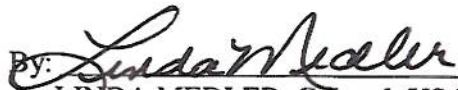
5. **WEBSITE DEVELOPMENT:** In addition to the above mitigation requirements, a link will be created for the Website, highlighting the Ogden Arsenal/Ogden AMA Historic District, specifically the history and importance of the unique historic buildings located within the EUL area. The Developer will be responsible for all incurred costs.
6. **SCHEDULE AND YEARLY STATUS REPORT:** A proposed schedule for the completion of the mitigation efforts described above in Sections 3-6 has been prepared by the Developer, and agreed upon by all parties (Attachment 5, Proposed Mitigation Schedule and Yearly Status Reports). A yearly status report will be submitted by the Developer for review by Hill AFB. This report will be submitted to the SHPO for their review and concurrence.
7. **UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS:** The Area of Potential Effect of the Undertaking reflects approximately 550 acres of land with negative findings regarding archaeological or other non-building-related cultural resources materials considered historic properties via 36 CFR § 800.16(l)(1) or materials including those defined under applicable provisions of the Native American Graves Protection and Repatriation Act and the Archaeological Resources Protection Act. However, should unanticipated discoveries of archaeological deposits become evident during any time of the Undertaking, the provisions of the applicable version of Hill AFB's Integrated Cultural Resources Management Plan shall be implemented. The Developer, if the discovering party, shall communicate such potential findings immediately to the Hill AFB Cultural Resources Management Program, and otherwise assist in securing the location and halting impacting activities until the finding can be investigated by Hill AFB.
8. **DISPUTE RESOLUTION:** Should Hill AFB, the Developer, or the SHPO object within thirty (30) days to any actions proposed pursuant to this MOA, Hill AFB shall consult with respective parties to resolve the objection. If Hill AFB determines that the objection cannot be resolved, Hill AFB shall request the comments of the ACHP pursuant to 36 CFR § 800.7. Any Council comment provided in response to such a request will be taken into account by Hill AFB in accordance with 36 CFR § 800.7(c)(4) with reference only to the subject of the dispute; Hill AFB and the Developer's responsibility to carry out all actions under this MOA that are not the subject of this dispute will remain unchanged.
9. **POSSIBLE IMPACTS OUTSIDE PROJECT AREA.** Following execution of this MOA, presently unidentifiable project-related activities or features, such as development of additional facilities, may occur outside the Undertaking's 550

acres. Such potential impacts will be addressed under standard provisions of 36 CFR § 800, and any party to this MOA accordingly may request its amendment to account for such presently unforeseen impacts.

**10. EFFECTIVE DATE AND DURATION:** This MOA shall become effective upon execution by all parties, and upon a final decision on the proposed Undertaking. If, after ten (10) years, any of the stipulations of this MOA have not been fulfilled, Hill AFB will notify the Utah SHPO and determine whether the MOA needs to be revised. Otherwise this MOA shall be in effect for the duration of the Undertaking.


Execution of this MOA by Hill AFB, the Developer, and the Utah SHPO, and implementation of its terms, evidence that Hill AFB has taken into account the effects of the proposed Undertaking and mitigated the adverse effect.

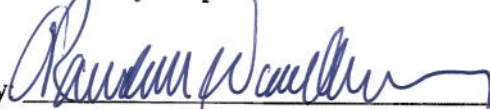
**DEPARTMENT OF THE AIR FORCE**

By:  Date: 12 June 08  
LINDA MEDLER, Colonel, USAF  
Commander, 75th Air Base Wing

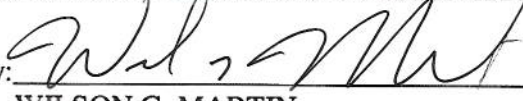
**SUNSET RIDGE DEVELOPMENT PARTNERS L.L.C.**

**BY: WOODBURY CORPORATION, ITS MANAGER**

By:  Date: 25/6/08  
JEFFREY K. WOODBURY, Vice-President  
Woodbury Corporation

By:  Date: June 25, 2008  
O. RANDALL WOODBURY, Secretary  
Woodbury Corporation

**UTAH STATE HISTORIC PRESERVATION OFFICE**

By:  Date: 6/23/08  
WILSON G. MARTIN  
Utah State Historic Preservation Officer



**MEMORANDUM OF AGREEMENT  
BETWEEN  
HILL AIR FORCE BASE  
AND  
THE UTAH STATE HISTORIC PRESERVATION OFFICER  
PURSUANT TO 36 CFR § 800  
REGARDING THE  
DEMOLITION OF 139 HISTORIC BUILDINGS,  
EXPLOSIVES CLEAR ZONE AREA,  
HILL AIR FORCE BASE, UTAH**

**WHEREAS**, Hill Air Force Base (AFB) has determined that the proposed demolition of 139 historic buildings (Appendix A) constitutes an undertaking that will have an adverse effect on properties that are eligible for inclusion in the National Register of Historic Places; and

**WHEREAS**, the Hill AFB has determined that, due to government budget constraints and future plans for Hill AFB-managed properties, two methods of mitigation are required; and

**WHEREAS**, Hill AFB has consulted with the Utah State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470, and its implementing regulations (36 CFR § 800); and

**NOW, THEREFORE**, Hill AFB and the Utah SHPO agree that the undertaking shall be implemented in accordance with the following stipulations to mitigate the adverse effect caused by the undertaking.

**STIPULATIONS**

**1. PRESERVATION:** Nine buildings will be preserved to mitigate the adverse effect caused by demolition. One-hundred twenty-seven buildings, represented by the nine types, will be demolished. Please see Appendix B for a list of these nine buildings.

The nine representative types proposed for preservation will be maintained and stabilized in their current condition. All of these buildings are in secure areas that are not accessible by the public and are, therefore, protected from vandalism. Among the buildings proposed for preservation, the facilities currently in use will be maintained to operational standards and will not be modified in any manner that is not in accordance with the Secretary of the Interior's Standards for Rehabilitation in perpetuity. Therefore, the historic character or architectural integrity of these buildings will not be diminished. Hill AFB Cultural Resources Management Program will monitor the buildings bi-annually to ensure that the preserved buildings are being maintained in the agreed upon manner.

In regards to the buildings proposed for preservation, the structural systems will be protected and maintained by cleaning the roof gutters and downspouts; replacing deteriorated flashing; keeping masonry, wood, and architectural metals in a sound condition; and assuring that structural members are free from insect infestation. Roof sheathing will be checked for proper venting to prevent moisture condensation and water penetration. In addition, proper drainage shall be provided so that water is not allowed to stand on flat, horizontal surfaces or accumulate in decorative features. The wood and architectural metal which comprises the window frames,

sashes, muntins, and entrances shall be protected and maintained through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems. Weatherization effort shall be made to protect the facility against moisture penetration and deterioration caused by exposure, vandalism, and other factors that could result in any type of deterioration, loss of historic character, or loss of architectural integrity.

**2. PUBLIC OUTREACH:** The adverse effect caused by the demolition of twelve buildings (not included in the nine preserved representative types) will be mitigated by the construction of an exhibit in the Hill Aerospace Museum. This exhibit will consist of a wall-mounted display and free-standing model portraying the history of the Ogden Arsenal. The exhibit will include an account of the associated buildings in the Ogden Arsenal and their specific functions supporting munitions production, storage, and transfer during World War II. The Hill Aerospace Museum will retain custody of the exhibit, and maintenance will be incorporated into the existing preservation process at the Hill Aerospace Museum.

**3. PHOTOGRAPHS/DRAWINGS:** Photographs are required of representative types of the buildings cited for demolition in Appendix A. It will be confirmed that an adequate number of professional quality black and white negative photographs, in archival stable protective storage pages, along with associated as-built drawings, architectural elevations, and Historic American Engineering Record (HAER) documentation have been submitted to the Utah SHPO. It will be ensured that photographs are numbered and labeled with the address and the date that the photograph was taken, and that these photographs are keyed to a floor plan and site map. It shall be noted that if additional documentation is necessary, the photographs, as-built drawings, and architectural elevations will first be screened by Hill AFB Security personnel, and any particular information will not be publicly released if doing so would create an unreasonable security risk or violates any valid Federal security law or regulation. It is anticipated that no restrictions will be imposed if additional documentation is needed.

Additionally, an adequate number of high quality digital photographs and their associated as-built drawings, architectural elevations, and HAER documentation detailing all areas to be impacted by the undertaking shall be posted to the Hill AFB Cultural Resources Public Outreach Web Site (Web Site). Photographs, as-built drawings, architectural elevations, and HAER documentation shall be inserted into a slide show situated on a map of Hill AFB to show context. Photographs, as-built drawings, architectural elevations, and HAER documentation proposed for inclusion in the Web Site will first be screened by Hill AFB Security personnel and any particular information will not be publicly released if doing so would create an unreasonable security risk or violates any valid Federal security law or regulation. Classified or national security sensitive information, if any, regarding building design or function shall not be posted in violation of Federal law. Any information posted to the Web Site is subject to future removal if valid Federal security laws or regulations change in the future and such law or regulation prohibits such posting. It is anticipated that no restrictions will be imposed if additional documentation is needed.

**4. INTENSIVE LEVEL SURVEY (ILS) FORM:** It will be confirmed that an ILS form has been completed according to basic survey standards for a representative type of each building and submitted to the Utah SHPO.

Additionally, portions of the Utah State Historic Site form shall be posted with the corresponding photographs, as-built drawings, architectural elevations, or HAER documentation on the Web



Site. While the entire site form will not be posted, the most relevant portions of the site form, Parts 4 and 5, Architectural Description and History, will be posted together with photographs as-built drawings, architectural elevations, or HAER documentation subject to the security restrictions cited above in Section 3.


**5. DISPUTE RESOLUTION:** Should the Utah SHPO or Hill AFB object within thirty (30) days to any actions proposed pursuant to this MOA, Hill AFB shall consult with the Utah SHPO to resolve the objection. If Hill AFB determines that the objection cannot be resolved, Hill AFB shall request the comments of the Advisory Council on Historic Preservation (Council) pursuant to 36 CFR § 800.7. Any Council comment provided in response to such a request will be taken into account by Hill AFB in accordance with 36 CFR § 800.7(c)(4) with reference only to the subject of the dispute; Hill AFB's responsibility to carry out all actions under this MOA that are not the subject of this dispute will remain unchanged.

**6. EFFECTIVE DATE and DURATION:** This MOA shall become effective upon execution by both parties. If, after three (3) years, any of the stipulations of this MOA have not been fulfilled, Hill AFB will notify the Utah SHPO and determine whether the MOA needs to be revised.

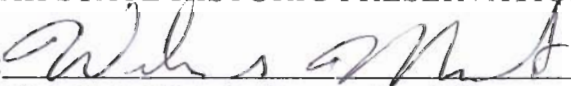
This MOA supplements the previous MOA, effective in September 2003, regarding the demolition of seven historic buildings in the ECZ area of Hill AFB. These seven historic buildings fit into the compatible representative building types proposed for preservation in Section 1 for the adverse effect caused by the demolition of 127 buildings in the ECZ area at Hill AFB.

Execution of this MOA by Hill AFB and the SHPO, and implementation of its terms, evidence that Hill AFB has taken into account the effects of the proposed demolitions on historic properties and mitigated the adverse effect.

**DEPARTMENT OF THE AIR FORCE**

By:  Date: 20 Feb 05  
SHARON K. G. DUNBAR, Colonel, USAF  
Commander, 75th Air Base Wing

**UTAH STATE HISTORIC PRESERVATION OFFICER**

By:  Date: 3/29/05  
Utah State Historic Preservation Officer

# *Standard Operating Procedure*

## **UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS**

### **APPLICABLE LAWS AND REGULATIONS**

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

### **OVERVIEW**

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

### **POLICY**

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

### **PROCEDURE**

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

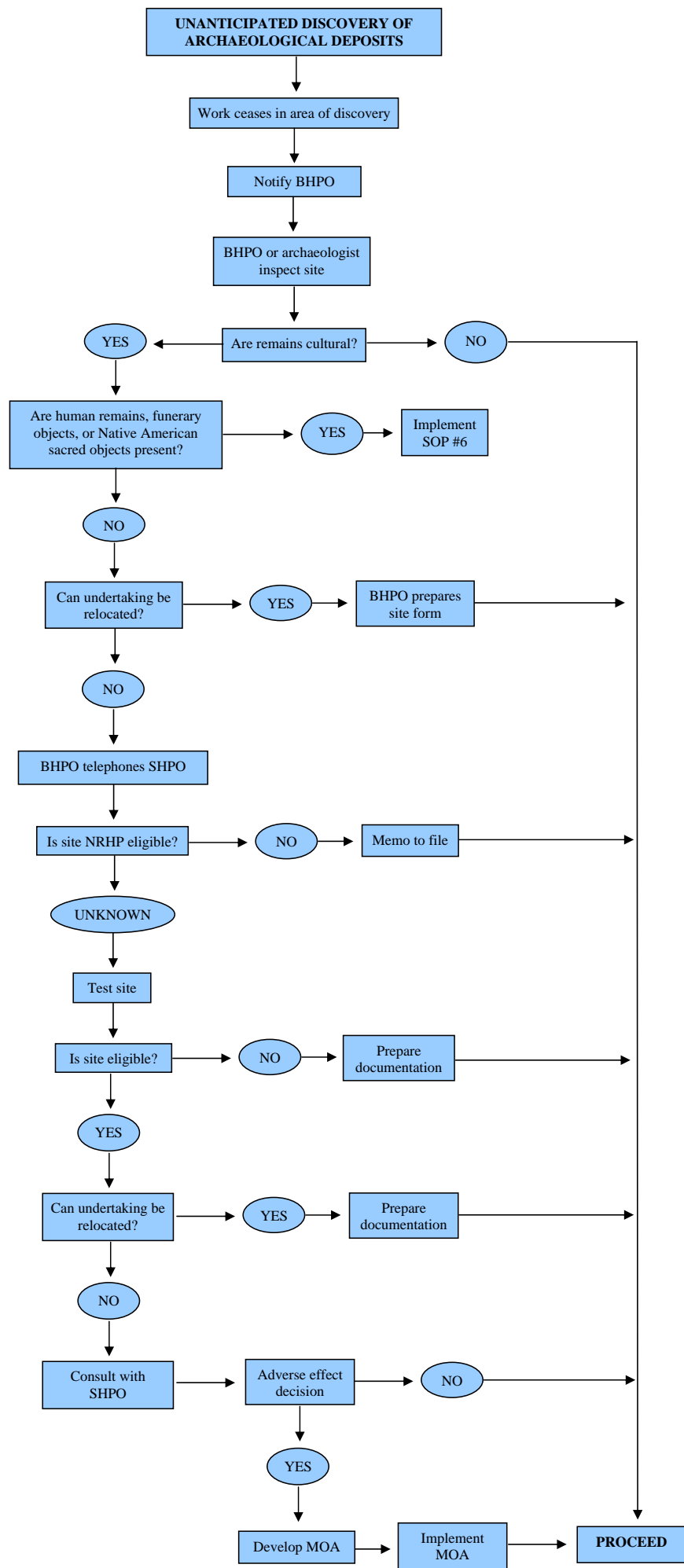
- ◆ If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- ◆ If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

*The Section 106 review process is initiated at this point.*

- ◆ If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- ◆ If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- ◆ Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- ◆ If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- ◆ If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



## **FINDING OF NO SIGNIFICANT IMPACT**

**1. NAME OF ACTION:** Proposed Consolidated Transportation Facility, Hill Air Force Base, Utah.

**2. DESCRIPTION OF THE PROPOSED ACTION:** Hill Air Force Base (AFB) proposes to construct a new consolidated transportation facility to accommodate current mission requirements. The proposed action would provide adequate facilities for vehicle maintenance and repairs to be completed. Eleven antiquated buildings on the base would be demolished.

**3. SELECTION CRITERIA:**

The proposed action meets the following criteria:

- be located in close proximity to Hill AFB fleet vehicles and the flight line;
- provide 65,200 square feet (ft<sup>2</sup>) of military compliant structures, plus driveways and parking;
- comply with United States Air Force (USAF) health and safety standards;
- comply with USAF real property policies;
- not encroach on existing facilities;
- not encroach on locations that have been approved for upcoming base facilities; and
- be adjacent to existing utilities.

**4. ALTERNATIVES CONSIDERED:**

### Alternative A: Proposed Action

Construct a new consolidated transportation facility. The new facility would meet all of the selection criteria.

### Alternative B: No Action

A new consolidated transportation facility would not be constructed.

### Alternative C: Renovating Existing Facilities

Renovation costs would exceed 70 percent of the real property value of the existing facilities and would violate current USAF real property policies. This alternative was not considered in further detail in the document.

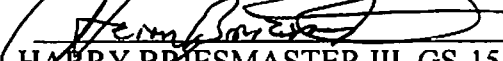
### Alternative D: Other Locations on Base

Constructing the facility elsewhere on base did not meet the criteria for encroachment on existing and future base facilities. This alternative was not considered in further detail in the document.

**5. SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:**

Issue	Alternative A Proposed Action	Alternative B No Action
Air Quality	<p>Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled.</p> <p>Air emissions from operations would be less than 0.3 tons per year for each criteria pollutant as well as for hazardous air pollutants (HAPs).</p> <p>Conformity with the Clean Air Act was demonstrated.</p>	<p>Existing air emissions are 0.2 tons per year or less for each criteria pollutant as well as for HAPs.</p>
Solid and Hazardous Waste	<p>If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facility.</p>	<p>Non-regulated wastes are collected and disposed. Various regulated wastes are collected, stored, analyzed if necessary, and either recycled or disposed in accordance with federal and state regulations.</p>
Water Quality	<p>During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.</p>	<p>Good housekeeping measures and other best management practices are being followed.</p>

**6. FINDING OF NO SIGNIFICANT IMPACT:** Based on the above considerations, a finding of no significant impact (FONSI) is appropriate for this assessment.

Approved by:   
HARRY BRIESMASTER III, GS-15, DAF  
Director, 75th Civil Engineer Group

Date: 1 Feb 11